

Sir Galahad Commercial Thinning and Density Management
Environmental Assessment
DOI-BLM-OR-R050-2010-0008-EA
South River Field Office, Roseburg District

“Draft” Finding of No Significant Impact

Date Prepared: October 26, 2010

Overview

The analysis area encompasses lands in the Swiftwater Resource Area of the Roseburg District, Bureau of Land Management (BLM) located in the Yellow Creek 6th-field subwatershed of the Upper Umpqua River 5th-field watershed, the Cabin Creek-Calapooya 6th-field subwatershed of the Calapooya Creek 5th-field watershed and the Yoncalla Creek 6th-field subwatershed of the Elk Creek/Umpqua River watershed. Less than five acres of the project area are located in the Elk Creek/Umpqua River watershed and are not considered likely to have any detectable effects.

The locations of the proposed commercial thinning and density management units are as follows:

- Matrix units in Section 25 in T. 23 S., R. 6 W.; and Section 19 in T. 23 S., R. 5 W., W.M.
- Late-Successional Reserve units in Section 35 in T. 23 S., R. 6 W.; and Section 3 in T. 24 S., R. 6 W., W.M.

The Sir Galahad Commercial Thinning and Density Management Environmental Assessment (EA) analyzed three alternatives. In addition to Alternative One - No Action discussed on page 4 of the EA, two proposed action alternatives were analyzed. These consist of Alternative Two - Even-Spaced Thinning in the General Forest Management Area (p. 11) and Alternative Three - Variable-Spaced Thinning of Stands in the General Forest Management Area Located in Spotted Owl Critical Habitat (p.12). Project design features common to both Alternatives Two and Three are described at pages 4 through 11.

Two additional alternatives were considered, based on scoping and a review of comments on similar thinning analyses previously conducted by this office. As addressed in the EA (pp. 12 and 13), these alternatives were not analyzed in detail because one alternative is essentially addressed by the proposed action alternatives, and the second is not economically viable.

Both context and intensity must be considered in determining significance of the environmental effects of agency action (40 CFR 1508.27):

Context

The two principal project watersheds, Upper Umpqua River and Calapooya Creek, drain a combined area of approximately 327,000. The proposed action is a site-specific treatment of approximately 522 acres.

As this is an intermediate treatment affecting less than 0.2 percent of the combined watershed areas, it does not bear any regional, statewide, national or international importance.

Intensity

The Council on Environmental Quality includes the following ten considerations for evaluating intensity.

1. *Impacts may be both beneficial and adverse.* - 40 CFR 1508.27(b) (1)

The proposed action alternatives would both have positive impacts on the treated forest stands by improving tree health and vigor, enhancing commercial value of timber in the Matrix land use allocations, and accelerating development of late-successional conditions in Late-Successional Reserve and Riparian Reserve land use allocations (EA, pp. 21-37).

Commercial thinning would also provide timber for manufacturing. This would provide employment, wages to timber workers and employees in associated industries, and generate tax revenues for local, state and federal governments.

These impacts would be consistent with the range and scope of effects analyzed and described in the 1994 *Final - Roseburg District Proposed Resource Management Plan / Environmental Impact Statement* (1994 PRMP/EIS), which analyzed the timber management program for the Roseburg District.

2. *The degree to which the proposed action affects public health or safety.* - 40 CFR 1508.27(b) (2)

The proposed action is a vegetation treatment that would not affect public health or safety because it would occur in a landscape dominated by Federal and industrial forest land.

As described in the EA (pp. 11 and 67), fuel reduction treatments would be applied in the Wildland Urban Interface and Late-Successional Reserves to reduce and modify the arrangement of fuel loads. This would reduce risk of ignition, reduce rate of spread in the event of a fire start, and shorten the time necessary for containment and control.

3. *Unique characteristics such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.* - 40 CFR 1508.27(b) (3)

As addressed in the EA (p. 14), there are no Areas of Critical Environmental Concern; prime farmlands; wetlands; wilderness; or wild and scenic rivers in proximity to the proposed commercial thinning and density management units.

As described in the EA (p. 14), cultural clearances have been completed. No resources of significant cultural or historical value were identified. Consequently, no effects are anticipated.

4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial.* - 40 CFR 1508.27(b) (4)

The BLM regularly conducts thinning and density management across western Oregon. There is a wide body of literature describing effects of such forest management activity. Effects are expected to be consistent with those in published literature cited in the EA, and are not expected to be highly controversial.

The public has had the opportunity to provide scoping comments and comments on numerous proposals similar to this one. No comments received indicated controversy over the nature of effects on the quality of the human environment.

5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.* - 40 CFR 1508.27(b) (5)

This project is not unique as the BLM regularly conducts thinning. Based on professional experience and the substantial body of literature on the subject, there is little uncertainty regarding the effects. The direct, indirect and cumulative environmental effects all of the alternatives are fully analyzed in Chapter Three of the EA (pp. 16-72).

Climate change and greenhouse gas emissions have been identified as an emerging resource concern by the Secretary of the Interior (Secretarial Order No. 3226; January 16, 2009), the OR/WA BLM State Director (IM-OR-2010-012, January 13, 2010), and by the general public through comments on recent project analyses.

The U.S. Geological Survey, in a May 14, 2008 memorandum (USDI USGS 2008) to the U.S. Fish and Wildlife Service, summarized the latest science on greenhouse gas emissions and concluded that it is currently beyond the scope of existing science to identify a specific source of greenhouse gas emissions or sequestration and designate it as the cause of specific climate impacts at a specific location.

As described in the EA (pp. 70-72), both of the proposed action alternatives would result in the direct release of carbon. The amounts of carbon release would be undetectable relative to national and global emissions, and growth of remaining trees would sequester carbon equal to amounts released by thinning in a short interval of time (less than one-and-a-half years). Under either alternative, growth of trees in the thinned stands would recapture and sequester the amount of carbon released in less than two years. In the longer term (100 years) both alternatives would result in at least a 300 percent increase in on-site carbon storage, compared to the present.

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.* - 40 CFR 1508.27(b) (6)

The advertisement, auction, and award of timber sale contracts that allow the commercial thinning of forest stands are common, well-established practices. This project would not set precedence for any future actions, nor represent any decision in principle about future considerations, as any new proposals for commercial thinning would be subject to site-specific evaluation and analysis.

7. *Whether the action is related to other actions with individually insignificant impacts but cumulatively significant impacts.* - 40 CFR 1508.27(b) (7)

The interdisciplinary team considered the proposed action in the context of past, present, and reasonably foreseeable actions. No cumulatively significant effects to resources are predicted, as discussed in Chapter Three of the EA (pp. 16-72).

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Historic Register or may cause loss or destruction of significant scientific, cultural, or historical resources.* - 40 CFR 1508.27(b) (8)

As discussed above and in the EA (p. 14), all units proposed for treatment have been surveyed. No resources of significant cultural or historical value were identified that could potentially be affected.

9. *The degree to which an action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.* - 40 CFR 1508.27(b) (9)

As illustrated in Table 3-5 in the EA (p. 31), there are seven **northern spotted owl home ranges** overlapping the project area that have been regularly or intermittently occupied over the past decade.

No effect from noise disruption would be expected because activities would occur outside minimum disruption distances for known occupied spotted owl sites or unsurveyed suitable habitat, as established by the U.S. Fish and Wildlife Service, or would be subject to seasonal restriction from March 1st to July 15th to ensure spotted owls did not abandon nests or fledge prematurely. (EA, p. 10)

Because of relatively small tree size, high tree density, and lack of nesting structure the proposed commercial thinning and density management units are composed exclusively of dispersal-only and unsuitable habitat (EA, p. 30).

As described in the EA (p. 33), the U.S. Fish and Wildlife Service has determined viability thresholds of 50 percent suitable habitat in the core area and 40 percent suitable habitat in the home range, respectively. Suitable habitat levels below these thresholds are thought to compromise the reproductive success of owls.

As discussed in the EA (p. 39), thinning would modify up to 522 acres of dispersal-only habitat, indirectly or directly affecting seven spotted owl home ranges. Thinning would reduce vertical and horizontal cover by removing trees from suppressed and intermediate canopy classes, resulting in varying levels of residual tree density and canopy cover based on the marking prescription employed.

Spotted owls would be expected to continue to use these stands because post-treatment canopy cover would remain above 40 percent and the quadratic mean diameter of trees in the stands would exceed 11 inches, figures widely used as a threshold for dispersal function. However, spotted owls would likely utilize thinned stands less than unthinned stands until canopy cover returns to pre-project levels in approximately 10-20 years.

In core areas with less than 50 percent suitable habitat, and in nest patches, dispersal habitat plays an important role in allowing owls to move between patches of suitable habitat and forage. Thinning under these circumstances may result in the incidental take of individual spotted owls. Suitable habitat levels in the core areas of the Blackberry Canyon, Upper Yellow Creek, Yellow Trib., and Marsh Trib. home ranges are currently below this viability threshold.

As described in the EA (p. 42), potential effects to **marbled murrelets** would fall into two categories. One is disruption and disturbance from noise associated with thinning operations. The other is habitat related involving changes to the forest growth dynamics in the thinning units and individual tree removal.

Potential effects to marbled murrelets from noise arising from thinning activities are expected to be discountable because all activities would be conducted outside of the minimum disruption thresholds established by the U.S. Fish and Wildlife Service from any known murrelet site or unsurveyed suitable habitat. Otherwise; operations would be subject to Daily Operating Restrictions described in the EA (p. 42), ensuring that noise disruption would not cause marbled murrelet to abandon nests, abort feeding attempts, or fledge prematurely.

As marbled murrelet surveys were not conducted, micro-site conditions around potential nest trees within the unit boundaries and adjacent stands would be protected during thinning. These platform trees would be buffered by 90 feet (one-half site tree distance) with a feathered treatment of thinning to a basal area of approximately 120 square feet per acre. Regardless of the thinning prescription, potential nest trees would not be removed and potential nesting platforms (i.e. large limbs) would not be damaged (EA, p. 42).

As discussed in the EA (p. 58), the project area is within the range of **Kincaid's lupine** (*Lupinus sulphureus* ssp. *kincaidii*), a Federally-threatened herbaceous perennial plant. There would be no direct effect to any Kincaid's lupine populations that might be found during surveys in the project area because these populations would be managed in a manner that would maintain site integrity, while opening up the forest canopy (EA, p. 60).

As described in the EA (pp. 46 and 47), the Federally-threatened **Oregon Coast coho salmon** is present in the project watersheds. Critical Habitat for coho salmon in proximity to the project includes Cabin Creek, approximately 0.2 miles away. Essential Fish Habitat for coho salmon is coincident with coho salmon distribution and critical habitat.

As described in the EA (pp. 53), direct effects on fish from timber harvest and log hauling can result from the addition of fine sediment to streams resulting in a temporary increase in turbidity. No direct effects from commercial thinning would be expected on sediment load, however. Non-compacted forest soils in the Pacific Northwest have very high infiltration capacities and are not effective in transporting sediment overland by rain splash or sheet erosion. "No-treatment" areas beside streams would provide root strength sufficient to maintain bank stability, protect eroding banks and prevent additional sediment from entering streams and accumulating in gravel (EA, p. 54).

Indirect effects from road construction and renovation, timber hauling and road decommissioning could include reduced spawning success and egg and alevin survival where fine sediments reach streams and accumulate in gravels (EA, p. 53). All stream crossings along the existing haul route are greater than one-half mile above the nearest fish-bearing reaches. At this distance, turbidity would be indistinguishable against background levels and any small increase in turbidity would have a negligible effect on fish survival or foraging ability (EA, p. 54). Application of project design features and Best Management Practices described in the EA (p. 55) would arrest the mechanism for sediment transport or minimize the risk for delivery of fine sediment so that any effects would be expected to be short-term and so small as to not be measurable at the project level scale.

For reasons discussed in the EA (p. 53 and 54), it was concluded that the proposed action would not be likely to adversely affect Essential Fish Habitat for coho or chinook salmon.

10. *Whether the action threatens a violation of Federal, State, or local law or requirement imposed for the protection of the environment. . - 40 CFR 1508.27(b) (10)*

The proposed action was designed in conformance with management direction from the Roseburg District *Record of Decision and Resource Management Plan* (ROD/RMP), which itself is in conformance with all applicable laws and regulations. Furthermore, the design features described within the EA ensure that the proposed action complies with all applicable laws (ROD/RMP p. 5).

With respect to environmental justice, the proposed action would be consistent with Executive Order 12898 which addresses Environmental Justice (EA, p. 14). No potential impacts to low-income or minority populations have been identified by the BLM internally or through public involvement. Employment associated with the sales would involve local contractors who engage in similar types of work throughout Douglas County.

Correspondence with local Native American tribal governments has not identified any known unique or special resources in the project areas which provide religious, employment, subsistence or recreation opportunities (EA, p. 14).

As discussed in the EA (pp. 14 and 15), implementation of the Roseburg District *Integrated Weed Management Program*, in association with project design and contract provisions would minimize risk of introduction or spread of noxious weeds in association with road construction and timber harvest. Measures would include mulching disturbed areas and seeding with native grasses to discourage establishment of new weed populations and pressure washing or steam cleaning logging and road construction equipment prior to move-in to avoid introducing weeds from outside the project area. These actions would be consistent with the requirements of the Lacey Act; the Federal Noxious Weed Act of 1974, as amended; and Executive Order 13112, Invasive Species.

Based on the analysis of potential environmental impacts contained in the EA, I have determined that the proposed action would not have any significant impact on the human environment within the meaning of Section 102(2) (c) of the National Environmental Policy Act of 1969, and an environmental impact statement is not required.

I have further determined that the proposed action conforms to management direction from the *Record of Decision and Resource Management Plan (ROD/RMP)* for the Roseburg District, approved by the Oregon/Washington State Director on June 2, 1995.

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Date